

*Amendments to the Claims*

Please cancel claims 3 and 25.

Please amend claims 1, 4-5, 8-13, 16, 21, and 23 as follows:

1. (Currently Amended) A method for enhancing the performance of in an imaging device, comprising the steps of:

(1) receiving two or more input pixels ~~representative of an initial intensity value, the two or more input pixels being~~ obtained by an imager having a fixed focal length;

(2) forming two or more groups of intermediate weighted intensity values, each group (i) respectively corresponding to one of the two or more input pixels and (ii) including a plurality of weighted values, each value being based upon a separate ~~respective one or more weighting factor factors;~~ and

(3) combining respective intermediate weighted values from each of the groups ~~the two or more intermediate intensity values~~ to form a corresponding plurality of ~~an output pixels pixel~~.

2. (Currently Amended) The method of claim 1, wherein step (1) comprises the step of:

receiving a group of input pixels to be used in forming the output pixels ~~pixel~~ of step (3).

3. (Cancelled)

4. (Currently Amended) The method of claim 2 ~~3~~, wherein step (1) comprises the step of:

receiving a group of at least sixteen input pixels.

5. (Currently Amended) The method of claim 4 3, wherein step (3) comprises the step of:

forming at least eight output pixels.

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) The method of claim 1, further comprising the step of:

selecting the two or more groups of intermediate weighted values ~~first and second~~  
~~weighting factors~~ in accordance with an interpolation function.

9. (Currently Amended) The method of claim 1, further comprising the step of:  
selecting the two or more groups of intermediate weighted values ~~first and second~~  
~~weighting factors~~ in accordance with a cubic B-spline function.

10. (Currently Amended) The method of claim 1, further comprising the step of:  
selecting the two or more groups of intermediate weighted values ~~first and second~~  
~~weighting factors~~ in accordance with an nth-order spline function.

11. (Currently Amended) The method of claim 1, further comprising the step of:  
selecting the two or more groups of intermediate weighted values ~~first and second~~  
~~weighting factors~~ in accordance with a sinc function.

12. (Currently Amended) The method of claim 8, wherein ~~step (3) comprises the step of:~~

the forming a number of output pixels ~~that~~ is less than the number of input pixels received in step (1).

13. (Currently Amended) The method of claim 12, wherein step (3) comprises the step of:

selecting the number of output pixels ~~formed~~ based on a distance between the imager and an object.

14. (Currently Amended) The method of claim 12, wherein step (3) comprises the step of:

dynamically adjusting the number of output pixels ~~formed~~ based on a change in distance between the imager and an object.

15. (Original) The method of claim 12, wherein step (1) comprises the step of:  
low-pass filtering the input pixels.

16. (Currently Amended) A system for enhancing the performance of an imaging device having a fixed focal length, comprising:

a pixel receiving module to receive and temporarily store two or more input pixels obtained by an imager;

a pixel weighting module coupled to said pixel receiving module for forming two or more groups of intermediate weighted ~~intensity values based on weighting factors and intensity values of the two more pixels stored in said pixel receiving module~~, each group ~~of the two or more intermediate intensity values~~ (i) respectively corresponding to one of

the two or more input pixels and (ii) including a plurality of weighted values, each value being based upon a separate ~~respective one or more of the weighting factor factors~~; and a pixel combining module coupled to said pixel weighting module ~~for~~ to combine respective intermediate weighted values from each of the groups to form a corresponding plurality of ~~forming~~ output pixels ~~based on the two or more intermediate intensity values formed by said pixel weighting module.~~

17. (Original) The system of claim 16, wherein said pixel receiving module is a buffer capable of receiving and temporarily storing a predetermined number of pixels.

18. (Original) The system of claim 17, wherein said pixel weighting module comprises:

a plurality of weighting cells coupled to said buffer, wherein each of said plurality of weighting cells receives at least two inputs, one input comprising a pixel intensity value from said buffer and one input comprising a weighting value, and wherein each of said plurality of weighting cells combines the at least two inputs to form an intermediate intensity value.

19. (Original) The system of claim 18, wherein the number of output pixels formed by said pixel combining module is selected based on a distance between the imager and an object.

20. (Original) The system of claim 18, wherein the number of output pixels formed by said pixel combining module is dynamically adjusted based on a change in distance between the imager and an object.

21. (Currently Amended) A method for transforming image resolution, comprising the steps of:

- (1) retrieving an image having an initial resolution from a memory comprised of ~~the image comprising~~ two or more original pixels ~~representative of an initial intensity value~~;
- (2) forming two or more groups of intermediate weighted ~~intensity~~ values, each group (i) respectively corresponding to one of the two or more input pixels and (ii) including a plurality of weighted values, each value being based upon a separate ~~respective one or more weighting factor factors~~;
- (3) combining respective intermediate weighted values from each of the groups ~~the two or more intermediate intensity values~~ to form a corresponding plurality of output pixels ~~an interpolated pixel~~; and
- (4) repeating steps (2) through (3) for additional pixels of the image to form a copy of the image having a resolution that is different than the initial resolution.

22. (Original) The method of claim 21, wherein step (1) comprises the step of: retrieving the image from a network server used to store images.

23. (Currently Amended) The method of claim 21, wherein step (1) comprises the step of:

receiving a group of original pixels to be used in forming the output pixels ~~interpolated pixel~~ of step (3).

24. (Original) The method of claim 23, wherein step (1) comprises the step of: low-pass filtering the original pixels.

25. (Cancelled)

26. (Previously Presented) The method of claim 21, further comprising the step of:

(5) selecting the weighting factors of step (2) in accordance with an interpolation function.

27. (Previously Presented) The method of claim 21, wherein step (5) comprises the step of:

using a cubic B-spline function to select the weighting factors.

28. (Previously Presented) The method of claim 21, wherein step (5) comprises the step of:

using an nth-order spline function to select the weighting factors.

29. (Previously Presented) The method of claim 21, wherein step (5) comprises the step of:

using a sinc function to select the weighting factors.

30. (Previously Presented) The method of claim 21, wherein step (4) comprises the step of:

forming a copy of the image having a resolution that is determined based on a requester's access rights.